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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,156	07/22/2005	Benoist Sebire	946-012024-US (PAR)	3779
2512 PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824	7590 07/09/2008		EXAMINER SAMUEL, DEWANDA A	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 07/09/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Supplemental  
Notice of Allowability**

**Application No.**

10/518,156

**Examiner**

DEWANDA SAMUEL

**Applicant(s)**

SEBIRE, BENOIST

**Art Unit**

2616

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06 March 2008.
2. ☒ The allowed claim(s) is/are 1,3 and 7-30.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of the:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 03/21/2008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/Ricky Ngo/  
SPE, AU 2616

## **DETAILED ACTION**

### ***Response to Arguments***

1. This communication is responsive to the communication filed on 03/24/2008.
2. **Claims 1,3,7-10** has been amended claims 2 and 4-6 were canceled claims 11-30 were added.

### ***Allowable Subject Matter***

3. The following is an examiner's statement of reasons for allowance: Park et al. (US Patent 6,735,723) discloses having a having a interleaving/deinterleaving used in a channel encoding system where the source data being transmitted in fig. 1...the interleaving comprised of bits sequence that is indexed which are inputted into frames ("burst") which are expressed 0,1,2,...,N-1 ( column 8 line 1-9)...a change within the bit sequence using the index ( column 8 line 11-67). Hatakeyama ( US Patent 6,452,985) discloses having receiver 105 comprised of a de-interleaving the demodulated data from the 384 symbols comprising the data transfer rate transfer 9600 bps( transmission burst", column 9 line 1-15). A modified receiver as taught by Hatakeyama indexing data ("information bits") by addresses before transmission as taught by Nara ( US Patent 6,009,544). In addition, Abe ( US Patent 6,272,123) discloses having a CDMA transmitter-receiver comprised of a interleaver 14 which carries out the interleaving to reduce the effect of burst errors ( column 4 line 25-35). A modified CDMA transmitter-receiver as taught by Abe implementing indexed bit sequences as taught by Park (US

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Patent 6,735,723). The prior art fails to anticipate or render obvious the following recited features: Claims 1 limitations : determining if modification of the values of the indexes is required by determining if  $K/2 \bmod D = 0$ , wherein K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts,  
By means of a shift term  $s = \text{int}[k/(K/2)]$ , wherein k is the value of the index of the information bit.

Claim 8 limitations: determining if  $K/2 \bmod D = 0$ , wherein K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts,  
if  $K/2 \bmod D = 0$ , de-interleaving the information bits based on modified values of the indexes, said modification of the index- being based on a shift term  $s = \text{int}[k/(K/2)]$ ,  
wherein k is the value of the index of the information bit.

Claim 9 limitations: to determine if modification of the values of the indexes is required by determining if  $K/2 \bmod D = 0$ , wherein K is the size of the data block given in bits,  
and D is the interleaving depth given as the number of bursts, and to compute positions of the information bits in the transmission bursts such that the values of the indexes of at least a portion of the information bits are modified of a shift term  $s = \text{int}[k/(K/2)]$ ,  
wherein k is the value of the index of the information bit.

Claim 10 limitations: determine if the value of any of the indexes has been modified before transmission of the transmission bursts by determining if  $K/2 \bmod D = 0$ , wherein

K is the size of the data block given in bits, and D is the interleaving depth given as the number of bursts, and in response to determination that  $K/2 \bmod D = 0$  to deinterleave the information bits based on modified values of the indexes, said modification of the indexes being based on a shift term  $s = \text{int}[k/(K/2)]$ , wherein k is the value of the index of the information bit.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kukla et al. ( US Patent 7,091,889) discloses having a speed and memory optimized interleaving.

Bliss et al. ( US Patent 6,774,825) discloses having a modulation coding based on a ECC interleave structure.

Ralkb et al. ( EP 0987850) discloses having two dimensional interleaving for cdma.

Mantel et al. ( US Patent 5,602,875) discloses having a method and apparatus for encoding and decoding information in a digital communication system.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DeWanda Samuel whose telephone number is (571) 270-1213. The examiner can normally be reached on Monday- Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/  
Supervisory Patent Examiner, Art  
Unit 2616

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/DeWanda Samuel/  
Examiner, Art Unit 2616  
7/8/2008

**Application Number****Application/Control No.**

10/518,156

**Applicant(s)/Patent under  
Reexamination**

SEBIRE, BENOIST

**Examiner**

DEWANDA SAMUEL

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